

Executive Summary: Future of Work

Research Question: What tools and technologies are organizations using to accelerate workforce transition to an increasingly automated world, and what impact will this acceleration have on culture?

Introduction: A CAHRS partner is interested in understanding how the acceleration of automation is calling for a rapid company response to a transitioning working environment and company culture. This summary highlights issues and lessons learned from automation in the past, addresses these issues in light of modern tools and theories, and provides suggestions on optimizing future organizational transitions.

Minimizing Barriers to Automation: Automation will introduce a large scale change to the Global workforce based on work assignments and occupational categories (Appendix 1). Companies can proactively address initial automation intimidation and anxieties by recognizing each as initial delays but not a full hindrance to adopting new technologies.¹ To avoid cultural labor issues brought about by automation anxiety and worker displacement, organizations are relying on the creation of new jobs and reskilling their present workers in the knowledge, skills, and abilities (KSA's) necessary to accommodate advances in technology rather than replacing them outright.^{2,3} Investments in education, training, social safety nets, and social contracts between employers and workers regarding benefits and protections, have helped mitigate automation's negative impacts in the past.^{4,5}

Learning Organizations: Due to the acceleration of automation and other technical advancements, it is important to create a learning culture to enhance employee adaptation. Learning organizations regularly change to adapt to new technologies as they are implemented and will be better suited for current and future challenges. A learning organization socially and culturally changes workers' mindset to adapt to current changes, expand their thinking, create synergistic results, and continuously learn together.⁶ Retail giant Amazon is reskilling one-third of their hourly workers on a voluntary basis to accommodate current and upcoming automation. Amazon's reskilling strategy will also retrain its employees with the intention to support regional and sector partnerships.³ Many employers address automation through recruiting or reskilling current employees (Appendix 2), but the reskilling strategy generally boosts employee morale.

Reskilling Demands: With the movement towards automation, companies must focus on closing employees' skills gaps by reskilling them to meet the needs of emerging roles and responsibilities (Appendix 2 & 3).⁷ By creating an HR infrastructure that manages the impact automation is making on the working environment, companies can expect a more productive workforce.^{8,9} Lynda Gratton and LinkedIn Learning portals highlight a growing need for a broad portfolio of learning mechanisms and a means of measuring that learning. To recognize the level of reskilling necessary, organizations should run initial testing to see areas of strength and opportunity for training or recruitment solutions. External data from benchmarking may also reveal trends within industries of skillset advancement and extinction across particular functions. To meet the specific needs of new working assignments, employees must be reskilled across a series of technical skills that firms can use such as programming, cybersecurity, tech management. System maintenance will be valuable as well (Appendix 4). Graveski points out that specifying skills necessary for a job is essential and aiming too broadly will lead to inefficient time management and improper reapplication of newly trained skillsets.^{7,10}

Essential Transferable Skills: There is a blend of transferable technical and soft skills that companies are better able to generalize across various work assignments. As industries face rapid technological change, social skills, empathy, teamwork, and emotional intelligence are more easily transferable and can support transitioning talent.⁶ Cognitive skill sets, such as adaptability and learning agility, are strong determinants of an employee's ability to take on new roles and responsibilities.¹¹

Training Program: One of the core processes for beginning a training program follows the ADDIE model consisting of analysis, design, develop, implement, and evaluation (Appendix 5). Before accelerating training, conducting an organizational and needs analysis is essential to assess individual and organizational alignment. In order to understand what we are accelerating our workforce towards, there needs to be a precise destination for training outcomes. Tailoring a training program through data considering personal, cultural, and organizational needs can support a human-centric training program that maintains a uniform curriculum tailored to a local flair.⁵ Current workplace projections show increased net occupational growth for social, emotional, and higher cognitive skills that available AI technologies are not able to replace in people.¹² The demand for physical labor is expected to fall with the implementation of automation set currently by the speed of government policy. The best way to reskill frontline workers is to nurture soft skills through culture, education, and formal training (Appendix 3).

Training Acceleration: Organizations can hope to see strong training results from creating internal instructional programs based on an organization's specific needs. By identifying current employees that are already equipped with the necessary skills, companies can utilize this knowledge to teach and train the rest of the workforce. Organizations can utilize the in house resources and achieve stability, similar to Amazon, that can reduce training costs.³ Amazon utilizes internal universities and training programs, whereas others have relied on external resources for instructors, or extended apprenticeship programs.^{3,4} Calculated delivery of this training program presents an opportunity for increasing frontline worker adoption by providing workers an opportunity to reskill and discover new career paths that caters to worker's interests among available positions. The Aspen institute and research from Cornell University have pointed out the importance of transparency in training outcomes through strong evaluation data that can allow trainees to understand the desired end goal. (Appendix 6).¹³ Using strong metrics to guide a training program initially and tracking progress throughout will promote strong local, regional, and global decision making.⁴

Cultural Influences: Managers have placed a large emphasis on defining a roadmap that promotes cultural agility that can embrace the implications of disruption through automation. MIT Sloan urges organizations to prioritize people strategies and recognize the former pitfalls of automation anxieties.^{14,15} By facilitating a learning environment through appropriate training, organizations can aim to create an organizational culture that supports displaced workers and reduces stigma of individual career transitions.⁴

Conclusion: By global projections, consumption will increase by \$23 trillion between 2015 and 2030 meaning a huge growth in Global services.⁸ Organizations can aim to outperform its competition through focusing on retraining over rehiring, conducting a thorough organizational and personal needs analysis, and designing centralized training curriculums that allow decentralized avenues by culture. Through incorporating these practices, firms can hope to adapt internally to an automating world and accomplish so without adverse cultural consequences.

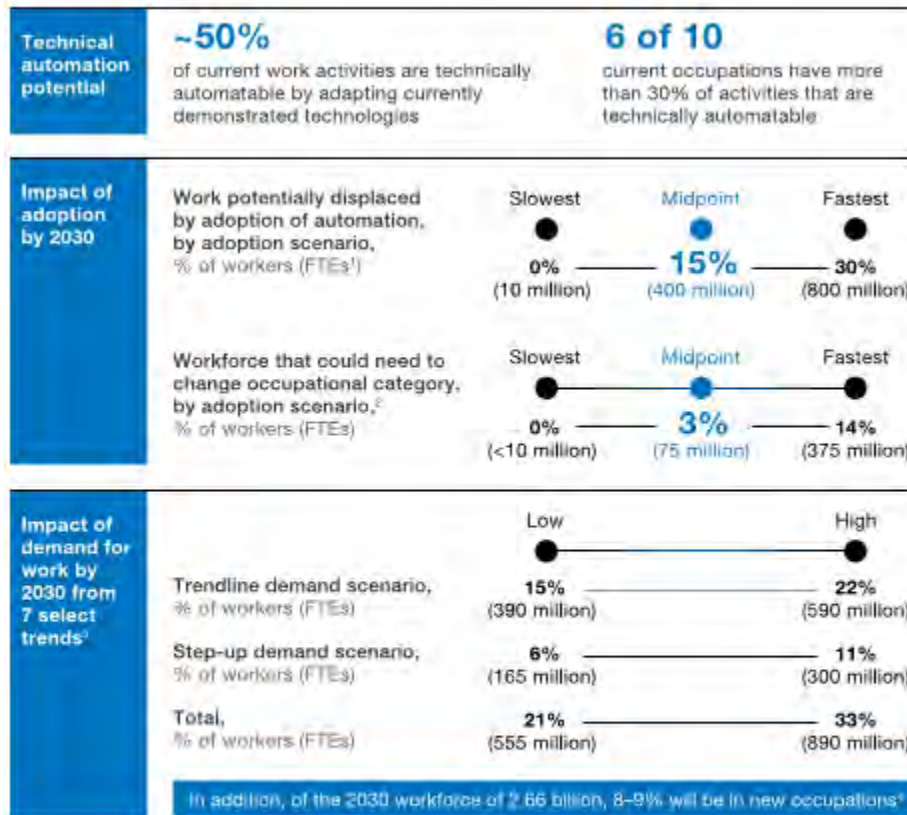
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Appendix

Appendix 1: Impact of Automation on Global Workforce

Automation will have a far-reaching impact on the global workforce.



¹ Full-time equivalents

² In trendline labor-demand scenario

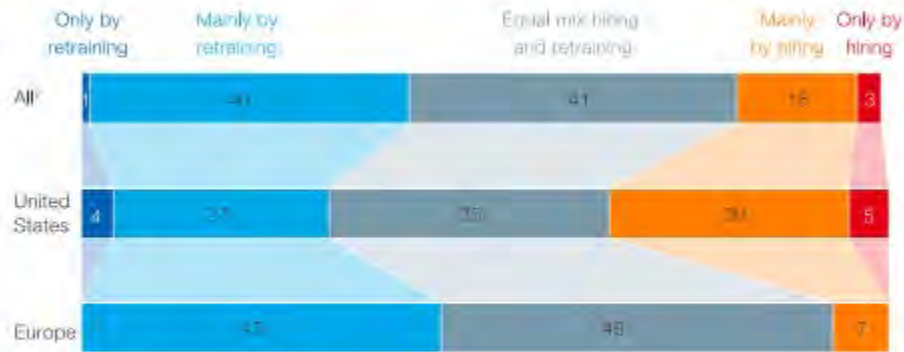
³ Rising incomes; healthcare from aging; investment in technology, infrastructure, and buildings; energy transitions; and marketization of unpaid work. Not exhaustive

⁴ See Jeffrey Lin, "Technological adaptation, cities, and new work," *Review of Economics and Statistics*, Volume 93, Number 2, May 2011.

Appendix 2: US and Europe’s Skills Gap Strategy

How can your organization best resolve its potential skills gaps related to automation and/or digitization over the next five years?

Private-sector organizations with >\$100 million annual revenue¹ who view the skills gap as a top-10 priority, % of respondents



¹Total n=197, or “Do not expect skills gaps” responses.

²All includes rest of world.

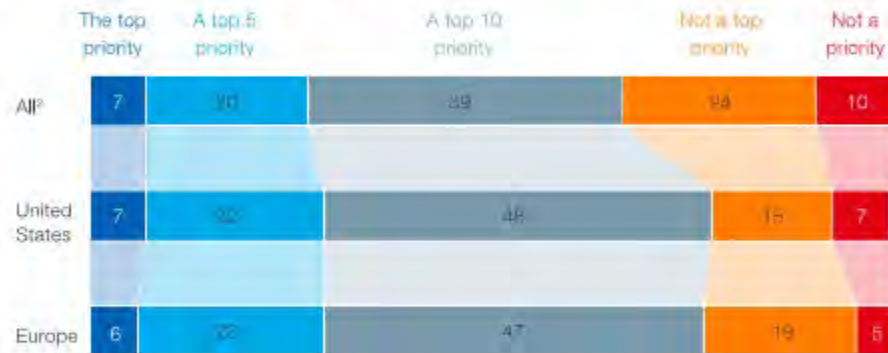
Note: All analysis filters out “Don’t know” responses from data set. Figures may not sum to 100 percent, because of rounding.

McKinsey&Company | Source: McKinsey panel survey, November 2017 (n=1,549); McKinsey analysis

Appendix 3: US and Europe’s Prioritizing Skills Gap

How important is addressing potential skills gaps related to automation and/or digitization within your organization’s workforce?

Private-sector organizations with >\$100 million annual revenue¹
% of respondents by perceived priority



¹Total n=283 respondents (US n=78, Europe n=115).

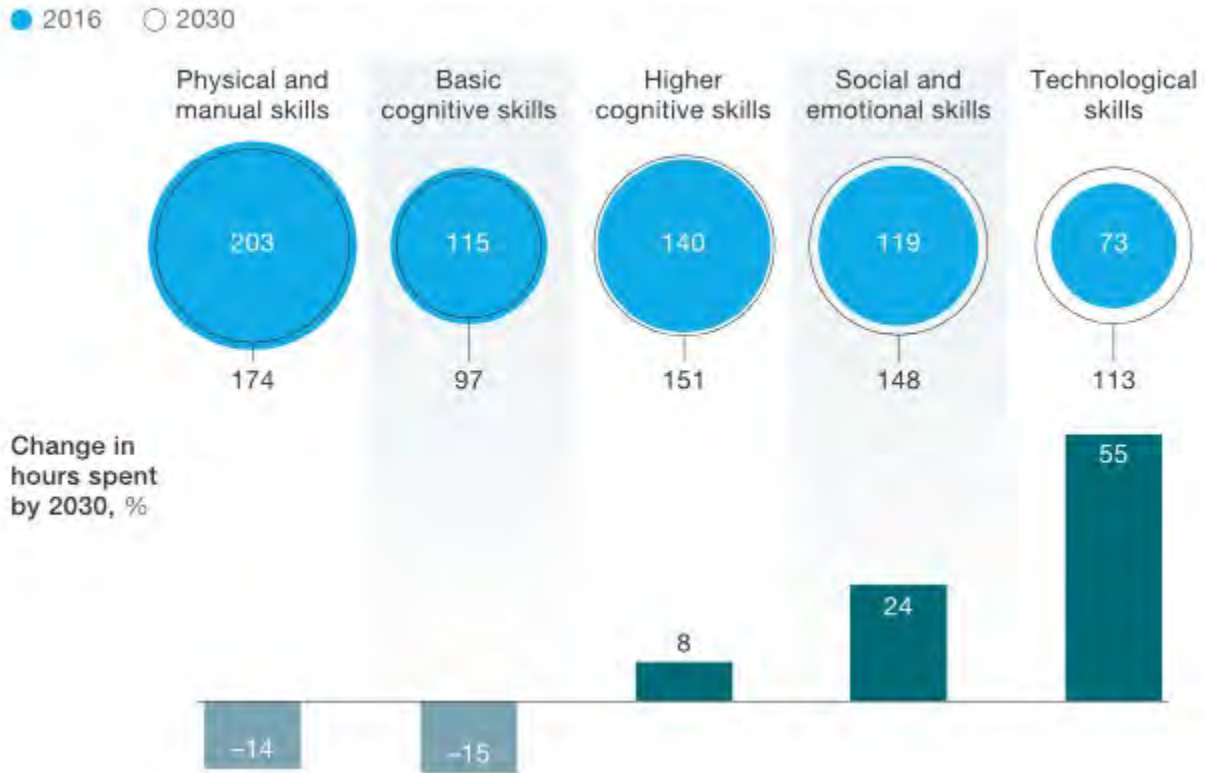
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Note: All analysis filters out “Don’t know” responses from data set. Figures may not sum to 100 percent, because of rounding.

McKinsey&Company | Source: McKinsey panel survey, November 2017 (n=1,549); McKinsey analysis

Appendix 4: Automation and the future of the workforce

Total hours worked in Europe and United States, 2016 vs 2030 estimate, billion



Appendix 5: The ADDIE Model

The ADDIE Model



Appendix 6: Measuring the Value of Learning

MEASURING THE VALUE OF LEARNING

